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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/944,472

08/30/2001

James J. Howarth

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(MUEI-0547.00/US)

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06/05/2003

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EXAMINER

DIAZ, JOSE R

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,472

Applicant(s)

HOWARTH, JAMES J.

Examiner

José R Díaz

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 2,9,17-23,25,32 and 40-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10-16,24,26-31 and 33-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 29 September 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2,4</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1, 3-8, 10-16, 24, 26-31 and 33-39 corresponding to Species I and III in Paper No. 7 is acknowledged.

Drawings

The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on October 29, 2002 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13 recites the limitation "the at least two apertures" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-8, 10, 12-14, 24, 26-31 and 35-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Baumberger et al. (US Pat. No. 5,228,862).

Regarding claims 1, 12-14, 24 and 35-37, Baumberger et al. teaches a method of aligning comprising: forming at least two channels (41) through a semiconductor device (10); providing a major surface of a carrier substrate (11, 13) with at least two alignment features (41); placing the semiconductor device over the carrier substrate and aligning the at least two channel with the at least two alignment features (see Figs. 1-3).

Regarding claims 3-4 and 26-27, Baumberger et al. further teaches forming two holes (41) in the carrier substrate (1) (see Figs. 2 and 3).

Regarding claim 5-8, 10 and 28-31, Baumberger et al. further teaches placing pins (41) through the at least two channels and into the at least two holes (see Figs. 2-3).

Claims 1, 12-16, 24, 35-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Bruner (US Pat. No. 3,678,385).

Regarding claims 1, 12-14, 24 and 35-37, Bruner teaches a method of aligning comprising: forming at least two channels (28) through a semiconductor device (2); providing a major surface of a carrier substrate (3) with at least two alignment features (12); placing the semiconductor device over the carrier substrate and aligning the at least two channel with the at least two alignment features (see Figs. 1 and 5).

Regarding claims 15-16 and 38-39, Bruner further teaches placing pins (12) on the carrier substrate (see Figs. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-11 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumberger et al. (US Pat. No. 5,228,862) in view of Bruner (US Pat. No. 3,678,385).

Regarding claims 10-11 and 33-34, Baumberger et al. fail to teach the step of forming a self-locking mechanism proximate at least one end of each pin. However, Bruner teaches that is well known in the art to form pins (12) having such a self-locking mechanism (see Fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the same time the invention was made to modify Baumberger et al. to include the step of forming a self-locking mechanism proximate at least one end of each pin. The ordinary artisan would have been motivated to modify Baumberger et al. in the manner described above for at least the purpose of providing latchable engagement between carrier substrate and the semiconductor device.

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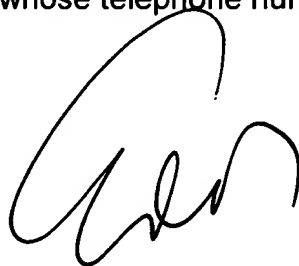
Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R Díaz whose telephone number is (703) 308-6078. The examiner can normally be reached on 9:00-5:00 Monday, Tuesday, Thursday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 746-3891 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JRD
June 1, 2003



EDDIE LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800